

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/561,097  
Source: IFWP  
Date Processed by STIC: 1/3/06

# ***ENTERED***



IFWP

## RAW SEQUENCE LISTING

DATE: 01/03/2006

PATENT APPLICATION: US/10/561,097

TIME: 11:00:00

Input Set : A:\MER-141-SEQLIST.txt

Output Set: N:\CRF4\01032006\J561097.raw

```

4 <110> APPLICANT: BAKER, Matthew
5      WATKINS, John
7 <120> TITLE OF INVENTION: THROMBOPOIETIN PROTEINS WITH IMPROVED
8      PROPERTIES
10 <130> FILE REFERENCE: MER-141
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/561,097
C--> 13 <141> CURRENT FILING DATE: 2005-12-16
15 <150> PRIOR APPLICATION NUMBER: PCT/US2004/006887
16 <151> PRIOR FILING DATE: 2004-06-25
18 <150> PRIOR APPLICATION NUMBER: EP 03014331.7
19 <151> PRIOR FILING DATE: 2003-06-26
21 <160> NUMBER OF SEQ ID NOS: 138
23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 174
27 <212> TYPE: PRT
28 <213> ORGANISM: Artificial Sequence
30 <220> FEATURE:
31 <223> OTHER INFORMATION: Modified human TPO
W--> 33 <221> NAME/KEY: VARIANT
34 <222> LOCATION: 50, 51, 55, 58
35 <223> OTHER INFORMATION: X=A or E;
36      X=S or W;
37      X=A, T, K, S or M;
38      X=A or T
W--> 41 <221> VARIANT
42 <222> LOCATION: 60, 61, 63, 67
43 <223> OTHER INFORMATION: X=R or A;
44      X=A, T or Q;
45      X=A, T, or I;
46      X=A, T or V
W--> 49 <221> VARIANT
50 <222> LOCATION: 69, 71, 72, 161
51 <223> OTHER INFORMATION: X=A, T, S or L;
52      X=A or L;
53      X=A, S or E;
54      X=N, A, T, R, E, D, G, H, P, K, Q or V
W--> 56 <221> VARIANT
57 <222> LOCATION: 162
58 <223> OTHER INFORMATION: X=A or P
W--> 60 <400> 1
61 Ser Pro Ala Pro Pro Ala Cys Asp Leu Arg Val Leu Ser Lys Leu Leu
62 1          5          10          15

```

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```

63 Arg Asp Ser His Val Leu His Ser Arg Leu Ser Gln Cys Pro Glu Val
64                20                25                30
65 His Pro Leu Pro Thr Pro Val Leu Leu Pro Ala Val Asp Phe Ser Leu
66                35                40                45
W--> 67 Gly Xaa Xaa Lys Thr Gln Xaa Glu Glu Xaa Lys Xaa Xaa Asp Xaa Leu
68                50                55                60
W--> 69 Gly Ala Xaa Thr Xaa Leu Xaa Xaa Gly Val Met Ala Ala Arg Gly Gln
70 65                70                75                80
71 Leu Gly Pro Thr Cys Leu Ser Ser Leu Leu Gly Gln Leu Ser Gly Gln
72                85                90                95
73 Val Arg Leu Leu Leu Gly Ala Leu Gln Ser Leu Leu Gly Thr Gln Leu
74                100               105               110
75 Pro Pro Gln Gly Arg Thr Thr Ala His Lys Asp Pro Asn Ala Ile Phe
76                115               120               125
77 Leu Ser Phe Gln His Leu Leu Arg Gly Lys Val Arg Phe Leu Met Leu
78                130               135               140
79 Val Gly Gly Ser Thr Leu Cys Val Arg Arg Ala Pro Pro Thr Thr Ala
80 145               150               155               160
W--> 81 Xaa Xaa Ser Arg Thr Ser Leu Val Leu Thr Leu Asn Glu Leu
82                165               170
85 <210> SEQ ID NO: 2
86 <211> LENGTH: 27
87 <212> TYPE: PRT
88 <213> ORGANISM: homo sapiens
90 <400> SEQUENCE: 2
91 Gly Glu Trp Lys Thr Gln Met Glu Glu Thr Lys Ala Gln Asp Ile Leu
92 1                5                10                15
93 Gly Ala Val Thr Leu Leu Leu Glu Gly Val Met
94                20                25
97 <210> SEQ ID NO: 3
98 <211> LENGTH: 15
99 <212> TYPE: PRT
100 <213> ORGANISM: homo sapiens
102 <400> SEQUENCE: 3
103 Pro Thr Thr Ala Val Pro Ser Arg Thr Ser Leu Val Leu Thr Leu
104 1                5                10                15
107 <210> SEQ ID NO: 4
108 <211> LENGTH: 332
109 <212> TYPE: PRT
110 <213> ORGANISM: homo sapiens
112 <400> SEQUENCE: 4
113 Ser Pro Ala Pro Pro Ala Cys Asp Leu Arg Val Leu Ser Lys Leu Leu
114 1                5                10                15
115 Arg Asp Ser His Val Leu His Ser Arg Leu Ser Gln Cys Pro Glu Val
116                20                25                30
117 His Pro Leu Pro Thr Pro Val Leu Leu Pro Ala Val Asp Phe Ser Leu
118                35                40                45
119 Gly Glu Trp Lys Thr Gln Met Glu Glu Thr Lys Ala Gln Asp Ile Leu
120                50                55                60

```

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```

121 Gly Ala Val Thr Leu Leu Leu Glu Gly Val Met Ala Ala Arg Gly Gln
122 65              70              75              80
123 Leu Gly Pro Thr Cys Leu Ser Ser Leu Leu Gly Gln Leu Ser Gly Gln
124              85              90              95
125 Val Arg Leu Leu Leu Gly Ala Leu Gln Ser Leu Leu Gly Thr Gln Leu
126              100             105             110
127 Pro Pro Gln Gly Arg Thr Thr Ala His Lys Asp Pro Asn Ala Ile Phe
128              115             120             125
129 Leu Ser Phe Gln His Leu Leu Arg Gly Lys Val Arg Phe Leu Met Leu
130              130             135             140
131 Val Gly Gly Ser Thr Leu Cys Val Arg Arg Ala Pro Pro Thr Thr Ala
132 145             150             155             160
133 Val Pro Ser Arg Thr Ser Leu Val Leu Thr Leu Asn Glu Leu Pro Asn
134              165             170             175
135 Arg Thr Ser Gly Leu Leu Glu Thr Asn Phe Thr Ala Ser Ala Arg Thr
136              180             185             190
137 Thr Gly Ser Gly Leu Leu Lys Trp Gln Gln Gly Phe Arg Ala Lys Ile
138              195             200             205
139 Pro Gly Leu Leu Asn Gln Thr Ser Arg Ser Leu Asp Gln Ile Pro Gly
140              210             215             220
141 Tyr Leu Asn Arg Ile His Glu Leu Leu Asn Gly Thr Arg Gly Leu Phe
142 225             230             235             240
143 Pro Gly Pro Ser Arg Arg Thr Leu Gly Ala Pro Asp Ile Ser Ser Gly
144              245             250             255
145 Thr Ser Asp Thr Gly Ser Leu Pro Pro Asn Leu Gln Pro Gly Tyr Ser
146              260             265             270
147 Pro Ser Pro Thr His Pro Pro Thr Gly Gln Tyr Thr Leu Phe Pro Leu
148              275             280             285
149 Pro Pro Thr Leu Pro Thr Pro Val Val Gln Leu His Pro Leu Leu Pro
150              290             295             300
151 Asp Pro Ser Ala Pro Thr Pro Thr Pro Thr Ser Pro Leu Leu Asn Thr
152 305             310             315             320
153 Ser Tyr Thr His Ser Gln Asn Leu Ser Gln Glu Gly
154              325             330

```

157 &lt;210&gt; SEQ ID NO: 5

158 &lt;211&gt; LENGTH: 7

159 &lt;212&gt; TYPE: PRT

160 &lt;213&gt; ORGANISM: Artificial Sequence

162 &lt;220&gt; FEATURE:

163 &lt;223&gt; OTHER INFORMATION: Linker peptide

165 &lt;400&gt; SEQUENCE: 5

166 Gly Ser Gly Ser Gly Ser Gly

167 1 5

170 &lt;210&gt; SEQ ID NO: 6

171 &lt;211&gt; LENGTH: 174

172 &lt;212&gt; TYPE: PRT

173 &lt;213&gt; ORGANISM: Artificial Sequence

175 &lt;220&gt; FEATURE:

176 &lt;223&gt; OTHER INFORMATION: Modified human TPO

## RAW SEQUENCE LISTING

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Input Set : A:\MER-141-SEQLIST.txt

Output Set: N:\CRF4\01032006\J561097.raw

178 &lt;400&gt; SEQUENCE: 6

```

179 Ser Pro Ala Pro Pro Ala Cys Asp Leu Arg Val Leu Ser Lys Leu Leu
180 1 5 10 15
181 Arg Asp Ser His Val Leu His Ser Arg Leu Ser Gln Cys Pro Glu Val
182 20 25 30
183 His Pro Leu Pro Thr Pro Val Leu Leu Pro Ala Val Asp Phe Ser Leu
184 35 40 45
185 Gly Glu Trp Lys Thr Gln Met Glu Glu Thr Lys Arg Gln Asp Ile Leu
186 50 55 60
187 Gly Ala Val Thr Leu Leu Leu Glu Gly Val Met Ala Ala Arg Gly Gln
188 65 70 75 80
189 Leu Gly Pro Thr Cys Leu Ser Ser Leu Leu Gly Gln Leu Ser Gly Gln
190 85 90 95
191 Val Arg Leu Leu Leu Gly Ala Leu Gln Ser Leu Leu Gly Thr Gln Leu
192 100 105 110
193 Pro Pro Gln Gly Arg Thr Thr Ala His Lys Asp Pro Asn Ala Ile Phe
194 115 120 125
195 Leu Ser Phe Gln His Leu Leu Arg Gly Lys Val Arg Phe Leu Met Leu
196 130 135 140
197 Val Gly Gly Ser Thr Leu Cys Val Arg Arg Ala Pro Pro Thr Thr Ala
198 145 150 155 160
199 Ala Pro Ser Arg Thr Ser Leu Val Leu Thr Leu Asn Glu Leu
200 165 170

```

203 &lt;210&gt; SEQ ID NO: 7

204 &lt;211&gt; LENGTH: 174

205 &lt;212&gt; TYPE: PRT

206 &lt;213&gt; ORGANISM: Artificial Sequence

208 &lt;220&gt; FEATURE:

209 &lt;223&gt; OTHER INFORMATION: Modified human TPO

211 &lt;400&gt; SEQUENCE: 7

```

212 Ser Pro Ala Pro Pro Ala Cys Asp Leu Arg Val Leu Ser Lys Leu Leu
213 1 5 10 15
214 Arg Asp Ser His Val Leu His Ser Arg Leu Ser Gln Cys Pro Glu Val
215 20 25 30
216 His Pro Leu Pro Thr Pro Val Leu Leu Pro Ala Val Asp Phe Ser Leu
217 35 40 45
218 Gly Glu Trp Lys Thr Gln Met Glu Glu Thr Lys Ala Gln Asp Ala Leu
219 50 55 60
220 Gly Ala Thr Thr Leu Leu Leu Glu Gly Val Met Ala Ala Arg Gly Gln
221 65 70 75 80
222 Leu Gly Pro Thr Cys Leu Ser Ser Leu Leu Gly Gln Leu Ser Gly Gln
223 85 90 95
224 Val Arg Leu Leu Leu Gly Ala Leu Gln Ser Leu Leu Gly Thr Gln Leu
225 100 105 110
226 Pro Pro Gln Gly Arg Thr Thr Ala His Lys Asp Pro Asn Ala Ile Phe
227 115 120 125
228 Leu Ser Phe Gln His Leu Leu Arg Gly Lys Val Arg Phe Leu Met Leu
229 130 135 140
230 Val Gly Gly Ser Thr Leu Cys Val Arg Arg Ala Pro Pro Thr Thr Ala

```

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Input Set : A:\MER-141-SEQLIST.txt

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```

231 145          150          155          160
232 Asn Ala Ser Arg Thr Ser Leu Val Leu Thr Leu Asn Glu Leu
233          165          170
236 <210> SEQ ID NO: 8
237 <211> LENGTH: 174
238 <212> TYPE: PRT
239 <213> ORGANISM: Artificial Sequence
241 <220> FEATURE:
242 <223> OTHER INFORMATION: Modified human TPO
244 <400> SEQUENCE: 8
245 Ser Pro Ala Pro Pro Ala Cys Asp Leu Arg Val Leu Ser Lys Leu Leu
246 1          5          10          15
247 Arg Asp Ser His Val Leu His Ser Arg Leu Ser Gln Cys Pro Glu Val
248          20          25          30
249 His Pro Leu Pro Thr Pro Val Leu Leu Pro Ala Val Asp Phe Ser Leu
250          35          40          45
251 Gly Glu Trp Lys Thr Gln Met Glu Glu Thr Lys Ala Gln Asp Thr Leu
252          50          55          60
253 Gly Ala Ala Thr Leu Leu Leu Glu Gly Val Met Ala Ala Arg Gly Gln
254 65          70          75          80
255 Leu Gly Pro Thr Cys Leu Ser Ser Leu Leu Gly Gln Leu Ser Gly Gln
256          85          90          95
257 Val Arg Leu Leu Leu Gly Ala Leu Gln Ser Leu Leu Gly Thr Gln Leu
258          100          105          110
259 Pro Pro Gln Gly Arg Thr Thr Ala His Lys Asp Pro Asn Ala Ile Phe
260          115          120          125
261 Leu Ser Phe Gln His Leu Leu Arg Gly Lys Val Arg Phe Leu Met Leu
262          130          135          140
263 Val Gly Gly Ser Thr Leu Cys Val Arg Arg Ala Pro Pro Thr Thr Ala
264 145          150          155          160
265 Asn Ala Ser Arg Thr Ser Leu Val Leu Thr Leu Asn Glu Leu
266          165          170
269 <210> SEQ ID NO: 9
270 <211> LENGTH: 174
271 <212> TYPE: PRT
272 <213> ORGANISM: Artificial Sequence
274 <220> FEATURE:
275 <223> OTHER INFORMATION: Modified human TPO
277 <400> SEQUENCE: 9
278 Ser Pro Ala Pro Pro Ala Cys Asp Leu Arg Val Leu Ser Lys Leu Leu
279 1          5          10          15
280 Arg Asp Ser His Val Leu His Ser Arg Leu Ser Gln Cys Pro Glu Val
281          20          25          30
282 His Pro Leu Pro Thr Pro Val Leu Leu Pro Ala Val Asp Phe Ser Leu
283          35          40          45
284 Gly Glu Trp Lys Thr Gln Ala Glu Glu Thr Lys Ala Gln Asp Ala Leu
285          50          55          60
286 Gly Ala Ala Thr Leu Leu Glu Gly Val Met Ala Ala Arg Gly Gln
287 65          70          75          80

```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/561,097

DATE: 01/03/2006  
TIME: 11:00:01

Input Set : A:\MER-141-SEQLIST.txt  
Output Set: N:\CRF4\01032006\J561097.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220>

to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 50, 51, 55, 58, 60, 61, 63, 67, 69, 71, 72, 161, 162

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/561,097

DATE: 01/03/2006

TIME: 11:00:01

Input Set : A:\MER-141-SEQLIST.txt

Output Set: N:\CRF4\01032006\J561097.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application Number  
 L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
 L:33 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:41 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1  
 L:49 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1  
 L:56 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1  
 L:60 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1  
 L:67 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:48  
 L:69 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:64  
 L:81 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:160